

## *Dasyatis izuensis*, a New Stingray from the Izu Peninsula, Japan

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**Abstract** A new dasyatidid stingray, *Dasyatis izuensis* sp. nov., from Japan is described on the basis of specimens collected from the Izu Peninsula. The new species is distinguished by having the following characters: diamond-shaped disc; dorsal tail keel; white ventral tail fold, its length 24.6–32.3% of disc width; short preorbital snout length, 14.1–18.7% of disc width; smooth body even in adults except for a row of 2–6 small tubercles before tail spine; and 18–20 intestinal valve turns.

The genus *Dasyatis* Rafinesque, 1810, is one of the five genera of the family Dasyatidae and is typically characterized by having a long and whip-like tail, tail spine(s), and a ventral tail fold which terminates before the tip of the tail. This genus includes about 35 species and may well be divided into several subgroups on the basis of the morphology of the disc (Compagno and Roberts, 1984; Roberts and Karnasuta, 1987; Nishida and Nakaya, 1988) and the presence or absence of a dorsal tail fold or keel. Recently, Nishida and Nakaya (1988) clarified the *Dasyatis*-complex which has a long snouted disc. However, the classification of *Dasyatis* with a diamond-shaped disc is poorly known and comprehensive work is now needed. In the course of the taxonomic study, the first author found specimens of a golden brown stingray with a diamond-shaped disc, collected by gill net from the coastal waters around the Izu Peninsula on the Pacific coast of Japan. This ray belongs to the genus *Dasyatis*, and is distinct from all the known species of the genus. Therefore we describe it as a new species, *Dasyatis izuensis* sp. nov.

### Methods

Institutional acronyms follow Leviton et al. (1985). Methods and terminology for counts and measurements follow Nishida and Nakaya (1988). In this study, the disc width (DW) is employed for the standard measure of the body size.

### *Dasyatis izuensis* sp. nov.

(New Japanese name: Izuhime-ei)

(Figs. 1–4)

**Holotype.** HUMZ 109730, mature male, 418.2 mm

DW, 34°40'N, 138°57'E, Shimoda Bay, Shizuoka Pref., Pacific coast of Japan, depth 10 m, gill net, Oct. 12, 1985.

**Paratypes** (7). HUMZ 109731, mature male, 375.0 mm DW, off Shirahama, Shizuoka Pref., Pacific coast of Japan, depth 20 m, gill net, Nov. 12, 1985; HUMZ 109732, 109733, immature males, 197.2, 182.9 mm DW, Shimoda Bay, Shizuoka Pref., Pacific coast of Japan, depth 10 m, gill net, Nov. 14, 1985; HUMZ 109716, adolescent male, 362.0 mm DW, off Numazu, Shizuoka Pref., Pacific coast of Japan, Mar. 27, 1986; HUMZ 105476, mature female, 367.5 mm DW, off Numazu, Shizuoka Pref., Pacific coast of Japan, Sep. 12, 1985; HUMZ 105907, immature female, 228.3 mm DW, off Itado, Shizuoka Pref., Pacific coast of Japan, depth 10 m, gill net, Nov. 19, 1985; HUMZ 107444, immature female, 182.6 mm DW, Shimoda Bay, Shizuoka Pref., Pacific coast of Japan, depth 10 m, gill net, Feb. 13, 1986.

**Comparative type materials.** *Dasyatis akajei* (Müller et Henle, 1841): RMNH 4255a, lectotype, immature female, 146.4 mm DW, southwest coast of Japan; RMNH 4255b, paralectotype, immature male, 122.0 mm DW, southwest coast of Japan. *D. navarrae* (Steindachner, 1892): NMW 76571, holotype, male, 316 mm DW, Shanghai. *D. sinensis* (Steindachner, 1892): NMW 78600, holotype, male, 380 mm DW, Shanghai. *D. ushiei* Jordan et Hubbs, 1925: FMNH 59380 (Carnegie Museum 7778), holotype, male, 367 mm DW, Mikawa Bay, Japan.

**Comparative non-type materials.** *Dasyatis akajei*: HUMZ 33183, 33188, 34856, 35027, 101466, 101830, 105499–105501, 105970, 106472, 106475, 107451, 110526, 110564, 110567, 110568. *D. americana*: NSMT-P 40564, FSFL-L 675, 693. *D. brevis*: LACM 31759-16. *D. guttata*: NSMT-P 40565, 40566, FSFL-L 800. *D. kuhlii*: HUMZ 37638, 96486, 103525, 103527, 105502, 105503. *D. margaritella*: ISH 142/62. *D. matsubarai*: HUMZ 35022, 35030, 35032, 60208, 65256, 70808, 90772, 98825, 105477–105479, 105481,

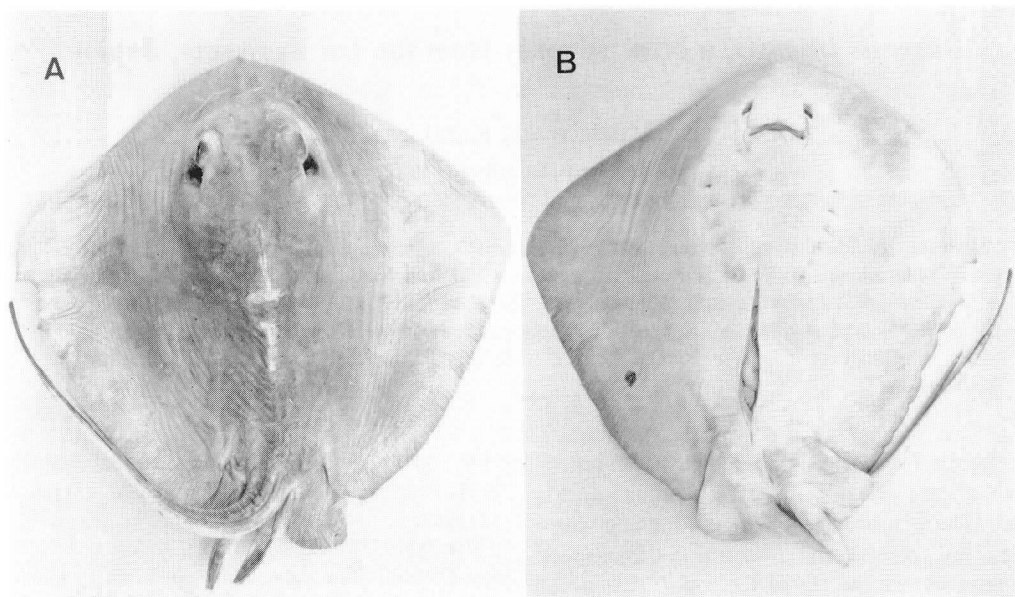


Fig. 1. *Dasyatis izuensis* sp. nov., holotype, 418.2 mm DW, mature male, HUMZ 109730. A, dorsal view; B, ventral view.

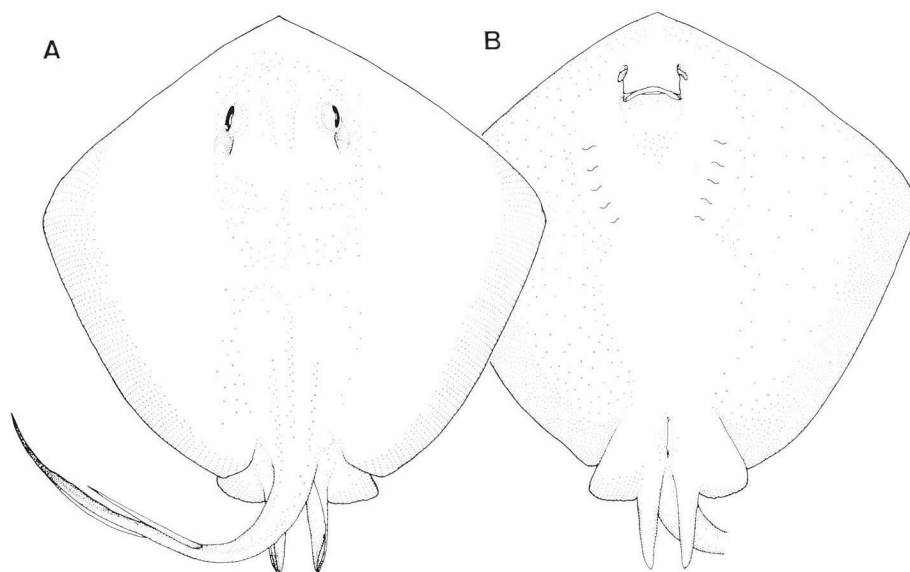


Fig. 2. *Dasyatis izuensis* sp. nov., holotype, 418.2 mm DW, mature male, HUMZ 109730. A, dorsal view; B, ventral view.

105482, 106290, 109976–109979, USNM 71903. *D. pastinaca*: HUMZ 6215, 6219–6221, 6224–6226, 6228. *D. sabina*: USNM 127331. *D. say*: USNM 148326.

**Diagnosis.** A moderately small stingray maturing at about 370 mm DW. Disc diamond-shaped and dorsally smooth. A row of 2–6 small tubercles present on the dorsal side of tail before spine in

adults. Preorbital snout length 14.1–18.7% of DW. Interorbital width 51.9–76.7% of preorbital snout length. Interspiracular width 95.7–129.6% of preorbital snout length. Tail with a dorsal keel. Short white ventral fold present on tail whose longitudinal length is 24.6–32.3% of DW. Number of prespine separate centra 101–110.

Table 1. Proportional measurements (in % of disc width) of *Dasyatis izuensis* sp. nov.

	Holotype		Paratypes							
	HUMZ 109730 418.2 mm DW male	HUMZ 109733 182.9 immature	HUMZ 109732 197.2 immature	HUMZ 109716 362.0 adolescent	HUMZ 109731 375.0 male	HUMZ 107444 182.6 immature	HUMZ 105907 228.3 immature	HUMZ 105476 367.5 male		
Total length	158.2	187.3	175.4	158.0	166.0	177.5	173.4	159.7		
Disc length	86.4	89.1	91.8	87.3	90.9	90.1	90.1	87.4		
Eyeball length	5.5	6.5	5.8	5.8	5.8	7.1	6.2	4.8		
Cornea	4.0	4.5	4.0	4.2	3.9	5.6	4.9	3.1		
Interorbital width	10.3	10.9	9.7	10.3	10.9	12.0	10.5	10.9		
Spiracle	6.2	6.6	7.3	6.7	6.6	8.1	7.0	6.3		
Interspiracular width	18.6	18.6	17.9	17.3	18.9	18.7	18.3	18.3		
Preorbital snout length	17.0	16.4	18.7	15.4	15.9	15.9	17.8	14.1		
Preoral snout length	17.2	17.7	18.4	16.9	17.4	17.5	17.0	16.0		
Nasal curtain length	5.6	5.4	4.2	5.8	6.1	5.0	5.7	5.4		
Internarial width	9.8	10.0	9.6	9.7	10.3	10.4	10.0	9.0		
Mouth width	10.3	9.8	8.7	9.2	10.7	9.7	9.2	8.9		
1st gill slit	3.3	3.1	2.7	2.9	3.7	3.1	2.7	3.1		
5th gill slit	2.3	2.1	1.9	1.7	2.4	2.3	1.8	2.4		
1st interbranchial width	21.8	23.1	21.7	20.5	22.5	22.7	22.3	21.6		
5th interbranchial width	13.8	14.3	14.2	13.9	14.3	14.3	14.2	13.6		
Prebranchial length	28.0	28.5	29.7	26.5	29.0	28.3	28.1	25.1		
Head length	42.1	41.6	43.4	38.9	43.1	41.6	41.8	37.7		
Precloacal length	77.1	77.1	76.0	73.6	78.1	77.2	79.1	78.0		
Snout to greatest width	44.1	38.0	41.6	38.7	41.4	42.7	40.2	33.2		
Cloaca to pelvic fin tip	15.7	15.4	15.7	16.9	18.6	15.3	18.9	19.0		
Clasper length	15.5	3.3	3.1	11.5	16.8	—	—	—		
Tail width	5.7	7.6	7.5	6.6	7.6	8.2	7.3	6.7		
Tail depth	4.0	5.8	5.4	4.4	4.6	5.5	4.9	4.6		
Prespine length	113.2	118.2	111.2	111.5	112.6	116.2	112.4	111.5		
Dorsal tail keel length	11.9	9.5	10.7	10.2	12.8	12.7	10.6	13.9		
Ventral tail fold length	32.3	24.6	28.4	27.6	28.6	30.1	30.0	26.0		

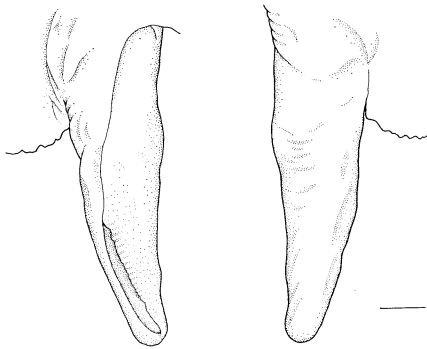


Fig. 3. Left clasper of *Dasyatis izuensis* sp. nov., holotype, 418.2 mm DW, mature male, HUMZ 109730. Dorsal view is shown on left and ventral view on right. Scale bar indicates 10 mm.

Number of intestinal spiral turns 18–20.

**Description.** Proportional measurements and counts are given in Tables 1 and 2. Disc moderately thick and diamond-shaped; disc width a little broader than disc length; snout tip obtuse; anterior and posterior margins of disc slightly convex; outer angles of disc rounded and posterior angles slightly angular. Preorbital snout length 5.9 in DW in holotype (5.3–7.1 in paratypes) and about equal to preoral snout length; eyes moderately large; eyeball diameter 3.1 (2.2–3.2) in preorbital snout length, 1.9 (1.7–2.3) in interorbital width, 1.1 (1.0–1.3) in spiracle; interspiracular width 0.9 (0.8–1.0) in preorbital snout length.

Mouth weakly arched, mouth width 1.7 (1.6–2.1) in preoral snout length; teeth pavement-like, arranged in quincunx, with a blunt cusp in adult males, and without a cusp in young males and females; floor of mouth with three stout papillae centrally and with one more slender papilla on both sides. Posterior margin of nasal curtain nearly straight and fringed; a central notch present; nasal curtain length 3.0 (2.8–4.4) in preoral snout length; internarial width 1.8 (1.7–1.9) in preoral snout length. Head length 2.4 (2.3–2.7) in DW; preoral snout length 2.4 (2.3–2.5) in head length; prebranchial length 1.5 (1.5) in head length. First interbranchial width 1.9 (1.7–2.0) and 5th interbranchial width 3.1 (2.8–3.1) in head length. Pre-cloacal length 1.3 (1.3–1.4) in DW.

Pelvic fin triangular and its outer corner slightly angular; cloaca to pelvic fin tip 6.4 (5.3–6.5) in DW.

Tail rather short and whip-like; anteriormost point of cloaca to tail tip 2.0 (1.7–2.2) in total length. Tail with one (one or two) spine(s); pre-spine length 1.4 (1.1–1.6) in total length. A low and short dorsal tail keel present behind the spine; the keel length 6.8 (6.9–11.6) in the distance between anteriormost point of cloaca and tail tip. Ventral tail fold present just below the spine; the fold length 2.5 (3.1–4.5) in the distance between anteriormost point of cloaca and tail tip.

Dorsal surface of disc naked even in adults; ventral surface of disc smooth. Dorsal surface of tail naked in young specimens, but two to six small tubercles present before the spine in specimens larger than about 370 mm DW.

Claspers long and stout, their length 5.6 (5.4 in mature paratype) in disc length. Dorsal pseudosiphon absent; dorsal margin of hypopyle comb-like (Fig. 3) and small flap present on the anterior corner of hypopyle.

Color of fresh specimens: dorsal surface of disc golden brown, interorbital and nuchal regions dark brown; ventral surface of disc white with gray outer and posterior margins; dorsal surface of pelvic fin brown, ventral surface white with gray posterior margin; dorsal surface of tail including keel dark brown, lateral surface golden brown, ventral surface pale; ventral tail fold white; distal two thirds of tail blackish (Fig. 4).

Color of preserved specimens: generally same as that of fresh specimens, except that dorsal surface of disc pale brown, and ventral surface whitish with dark outer and posterior margins.

**Remarks.** The genus *Dasyatis* is represented by about 35 species (Compagno and Roberts, 1984; Roberts and Karnasuta, 1987; Nishida and Nakaya, 1988) that may be divided into subgroups according to the shape of the disc, viz., trapezoidal, diamond-shaped, and long-snouted. Additionally, a keel is present on the dorsal side of the tail in some species but absent in others. *Dasyatis izuensis* sp. nov. has a diamond-shaped disc and a dorsal keel on the tail. These characters are shared by the following 12 species in addition to the western North Pacific species of the genus: *D. garouaensis* (Stauch et Blanc, 1962), *D. margarita* (Günther, 1870), *D. margaritella* Compagno et Roberts, 1984, *D. marmorata* (Steindachner, 1892) and *D. rudis* (Günther, 1870) from West Africa; *D. americana* Hildebrand et Schroeder, 1928, *D. guttata* (Schneider, 1801), *D. sabina* (Lesueur,

Table 2. Meristic counts of *Dasyatis izuensis* sp. nov.

	Holotype		Paratypes							
	HUMZ 109730 418.2 mm DW male ♂	HUMZ 109733 182.9 immature ♂	HUMZ 109732 197.2 immature ♂	HUMZ 109716 362.0 adolescent ♂	HUMZ 109731 375.0 mature ♂	HUMZ 107444 182.6 immature ♀	HUMZ 105907 228.3 immature ♀	HUMZ 105476 367.5 mature ♀		
Oral papillae	5	5	5	5	5	5	5	5		
Upper tooth rows	41	35	33	37	41	33	27	35		
Lower tooth rows	38	31	37	37	37	33	33	39		
Intestinal valve turns	19	18	18	19	19	19	20	19		
Total pectoral radials	—	103	102	103	—	105	104	—		
Propterygial radials	—	43	45	42	—	45	44	47		
Mesopterygial radials	11	13	11	11	13	15	14	14		
Metapterygial radials	47	47	46	50	46	45	46	—		
Pelvic radials	21	20	21	21	21	27	27	26		
Prespine separate centra	103	106	110	109	101	104	103	102		
1st synarcual free centra	3	2	3	3	4	3	3	3		
Intersynarcual centra	5	5	5	5	5	5	5	5		
2nd synarcual centra	10	11	—	9	11	—	9	—		
2nd synarcual + monospondylous	33	32	32	32	32	34	33	32		
Prespine diplospondylous	62	67	70	69	60	62	62	62		
Postspine diplospondylous	26	—	27	27	37	31	27	31		



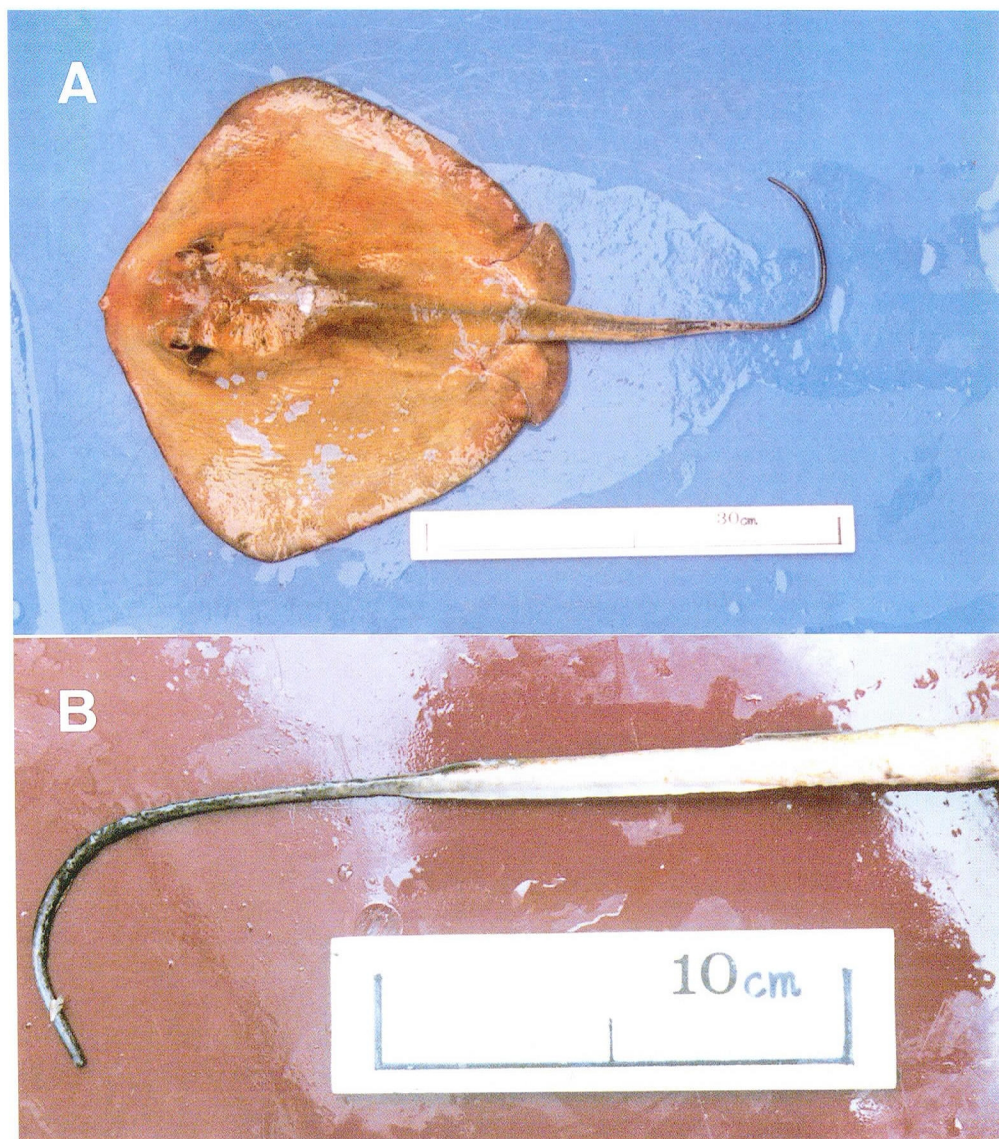


Fig. 4. *Dasyatis izuensis* sp. nov., paratype, 367.5 mm DW, female, HUMZ 105476. Color of fresh specimen. A, dorsal view; B, lateral view of tail.

1824) and *D. say* (Lesueur, 1817) from the western Atlantic; *D. brevis* (Garman, 1880) and *D. fluviorum* Ogilby, 1908 from the South Pacific; and *D. pastinaca* (Linnaeus, 1758) from the South Pacific, northeastern Atlantic and Mediterranean. However, judging from the examination of specimens and literature sources of each species, *D. izuensis* clearly differs from these 12 species by having the following combination of characters: plain-colored dorsal surface of disc; smooth

dorsal surface of disc even in adult; white ventral tail fold, its length 24.6–32.3% of DW; short preorbital snout length, 14.1–18.7% of DW; 18–20 intestinal valve turns; 102–105 total pectoral radials; 101–110 prespine separate centra. In the disc shape and the presence of dorsal and ventral tail folds, *Dasyatis laosensis* Roberts et Karnasuta, 1987 from the Mekong River also resembles *D. izuensis*. However, judging from the original description of *D. laosensis*, the orange

Table 3. Comparison of *Dasyatis izuensis* sp. nov. to seven allied species in the western North Pacific. \* These data were calculated from the original description (Chu, 1960).

	<i>D. izuensis</i>	<i>D. akatei</i>	<i>D. kuhlii</i>	<i>D. laevisgatus</i>	<i>D. matsubarai</i>	<i>D. navarrae</i>	<i>D. sinensis</i>	<i>D. ushieii</i>
	Holotype	Lectotype		Chu (1960)	Miyosi (1939)	Holotype	Holotype	Holotype
	418 mm DW	146 ♀		?	910 ♂	316 ♂	380 ♂	367 ♂
	♂	Paralectotype						
	Paratypes	122 ♂						
	182.6-367.5	Non-types	Non-types		Non-types			
	♂ 4, ♀ 3	119-440	221-436		325-478			
		♂ 5, ♀ 12	♂ 3, ♀ 3		♂ 10, ♀ 9			
Proportional measurements								
(in % of disc width)								
Precloacal length	73.6-79.1	75.6-75.7	67.0-69.7	—	68.2-75.2	92.1	82.4	71.1
Preorbital snout length	14.1-18.7	18.2-21.9	12.7-12.8	22.2*	16.8-22.0	25.4	24.9	16.9
Ventral tail fold length	24.6-32.3	48.0-48.6	70.5-71.3	51.2*	31.0-44.0	50.0	45.0	42.2
Counts								
Intestinal valve turns	18-20	18-21	14-15	—	25-26	—	—	26
Prespine separate centra	101-110	108-114	106-111	—	113-129	—	—	124
Coloration								
Bluish spots on dorsal surface of disc	absent	absent	present	absent	absent	absent	absent	absent
Black and white bands of tail	absent	absent	present	absent	absent	absent	absent	absent
Ventral tail fold	white	dark	dark	black	dark	—	—	dark
White spots on dorsal surface of disc	absent	absent	absent	absent	present	absent	absent	absent
Claspers								
Pseudosiphon	absent	absent	present	—	absent	—	—	—
Upper margin of hypopyge	comb-like	comb-like	smooth	—	smooth	—	—	smooth
Tuberculations								
Disc in adult	smooth	rough	rough	smooth	rough	rough	rough	—
Tubercles before spine	2-6 small	2-3 small	absent	absent	1-9 large	3 large	many small	absent
Posterior part of tail	smooth	rough	smooth	smooth	rough	—	—	smooth

coloration of the ventral side and the dorso-medial longitudinal row of enlarged denticles on the disc distinguish this species from *D. izuensis*.

Twelve species of the genus *Dasyatis* are known in the western North Pacific, and the present species resembles *D. akajei* (Müller et Henle, 1841), *D. kuhlii* (Müller et Henle, 1841), *D. laevigatus* Chu, 1960, *D. matsubarae* Miyosi, 1939, *D. navarrae* (Steindachner, 1892), *D. sinensis* (Steindachner, 1892), and *D. ushieii* Jordan et Hubbs, 1925 in having a diamond-shaped disc and a dorsal tail keel. These species are compared with the new species (see Table 3). *Dasyatis izuensis* differs from these seven species by possessing a short and white ventral tail fold (Fig. 4B) and a plain-colored smooth disc. Other prominent differences between *izuensis* and every species of the western North Pacific *Dasyatis* are given below. *D. akajei*: ventral tail fold length 48.0–48.6% of DW (24.6–32.3% in *izuensis*); ventral tail fold dark (white); disc rough in adult (smooth); posterior part of tail rough (smooth). *D. kuhlii*: preorbital snout length 12.7–12.8% of DW (14.1–18.7); ventral tail fold length 70.5–71.3% of DW (24.6–32.3); intestinal valve turns 14–15 (18–20); bluish spots on dorsal surface of disc present (absent); black and white bands of tail present (absent); ventral tail fold dark (white); pseudosiphon present (absent); upper margin of hypopyle smooth (comb-like); disc rough in adult (smooth); tubercles before spine absent (present). *D. laevigatus*: ventral tail fold length 51.2% of DW (24.6–32.3); ventral tail fold black (white); tubercles before spine absent (present). *D. matsubarae*: intestinal valve turns 25–26 (18–20); prespine separate centra 113–129 (101–110); ventral tail fold dark (white); white spots on dorsal surface of disc present (absent); upper margin of hypopyle smooth (comb-like); disc rough in adult (smooth); 1–9 large tubercles before spine (2–6 small); posterior part of tail rough (smooth). *D. navarrae*: pre-cloacal length 92.1% of DW (73.6–79.1); pre-orbital snout length 25.4% of DW (14.1–18.7); ventral tail fold length 50.0% of DW (24.6–32.3); disc rough in adult (smooth); 3 large tubercles before spine (2–6 small). *D. sinensis*: precloacal length 24.9% of DW (14.1–18.7); ventral tail fold length 45.0% of DW (24.6–32.3); disc rough in adult (smooth). *D. ushieii*: ventral tail fold length 42.2% of DW (24.6–32.3); intestinal valve turns 26 (18–20); prespine separate centra 124 (101–110);

ventral tail fold dark (white); upper margin of hypopyle smooth (comb-like); tubercles before spine absent in a specimen with 367 mm DW (present).

**Etymology.** The name *izuensis* refers to the type locality Izu Peninsula, Japan.

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#### Literature cited

- Chu, Y. T. 1960. The cartilaginous fishes of China. Science Press, Beijing, x+225 pp.
- Compagno, L. J. V. and T. R. Roberts. 1984. Marine and freshwater stingrays (Dasyatidae) of west Africa, with description of a new species. Proc. Calif. Acad. Sci., 43(18): 283–300.
- Garman, S. 1880. New species of selachians in the Museum collection. Bull. Mus. Comp. Zool. Harvard Coll., 6: 167–172.
- Günther, A. 1870. Catalogue of the fishes in the British Museum. Vol. 8. London, xxv+549 pp.
- Hildebrand, S. F. and W. C. Schroeder. 1928. Fishes of Chesapeake Bay. Bull. U. S. Bur. Fish., 43(1): 1–388.
- Jordan, D. S. and C. L. Hubbs. 1925. Record of fishes obtained by David Starr Jordan in Japan,



1922. Mem. Carnegie Mus., 10(2): 93-346, pls. 5-12.
- Lesueur, C. A. 1817. Description of three new species of the genus *Raja*. J. Acad. Nat. Sci. Philad., 1: 41-45, pls. 1-3.
- Lesueur, C. A. 1824. Description of several species of the Linnaean genus *Raja*, of North America. J. Acad. Nat. Sci. Philad., 4: 100-121, pls. 1-3.
- Leviton, A. E., R. H. Gibbs, Jr., E. Heal and C. E. Dawson. 1985. Standards in herpetology and ichthyology: Part 1. Standard symbolic codes for institutional resource collections in herpetology and ichthyology. Copeia, 1985(3): 802-832.
- Linnaeus, C. 1758. Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis, ed. 10, vol. 1 (pisces), Stockholm, pp. 239-338.
- Miyosi, Y. 1939. Description of three new species of elasmobranchiate fishes collected at Hyuga Nada, Japan. Bull. Biogeogr. Soc. Japan, 9(5): 91-97.
- Müller, J. and J. Henle. 1841. Systematische Beschreibung der Plagiostomen. Veit und Comp., Berlin, xxii+200 pp., 60 pls.
- Nishida, K. and K. Nakaya. 1988. A new species of the genus *Dasyatis* (Elasmobranchii: Dasyatidae) from southern Japan and lectotype designation of *D. zugei*. Japan. J. Ichthyol., 35(2): 115-123.
- Ogilby, J. D. 1908. On new genera and species of fishes. Proc. Roy. Soc. Queensland, 21: 1-26.
- Rafinesque, C. S. 1810. Caratteri di nuovi generi e nuovi specie di animali e piante della Sicilia con varie osservazioni sopra i medesimi. Parts 1-3. Palermo, 105 pp., 20 pls.
- Roberts, T. R. and J. Karnasuta. 1987. *Dasyatis laosensis*, a new whiptailed stingray (family Dasyatidae), from Mekong River of Laos and Thailand. Env. Biol. Fish., 20(3): 161-167.
- Schneider, J. G. 1801. In M. E. Bloch and J. G. Schneider. Systema ichthyologiae iconibus CX illustratum. Berolini, 1+x+584 pp., 110 pls.
- Stauch, A. and M. Blanc. 1962. Description d'un selacien rajiforme des eaux douces du Nord-Cameroun, *Potamotrygon garouaensis* n. sp. Bull. Mus. Natn. Hist. Nat. (Paris), 34(2): 166-171.
- Steindachner, F. 1892. Über einige neue und seltene Fischarten in den Sammlungen des K. K. naturhistorischen Hofmuseums. Anz. K. Akad. Wiss. Wien, 29: 130-134.
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# 伊豆半島沿岸からのアカエイ属の1新種

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静岡県伊豆半島沼津及び下田沖の水深約 10-20 m からアカエイ属の新種イヅヒメエイ *Dasyatis izuensis* が得られた。本種は菱形の体盤を持つこと、尾部背面に隆起を持つこと、体盤背面が金茶色で円滑であること、尾部腹面の皮褶が白色でその長さが体盤幅の 35% 以下であること、吻長が体盤幅の 14.1-18.7% であること、腸の螺旋弁の巻き数が 18-20 であることなどで、他のアカエイ属の種と明瞭に区別される。

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